WHAT IS CLAIMED IS:

- 1. A process for reducing NO_x emissions in a gaseous combustion effluent stream containing $\left(NO \text{ and/or } NO_2\right)$ comprising:
- a) adding hydrogen peroxide to the effluent stream in sufficient amounts to generate nitric acid by first stage reactions as follows:

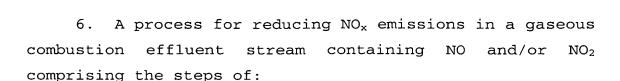
$$2NO + H_2O_2 + O_2 -----> 2HNO_3$$

 $2NO_2 + H_2O_2 -----> 2HNO_3$
 $2NO + 2NO_2 + O_2 + 2H_2O_2 ---> 4HNO_3$.

2. The process of claim 1 and further comprising, after nitric acid is generated, sufficient amounts of potassium hydroxide are added to the effluent stream to generate potassium nitrate in second stage reactions as follows:

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2HNO_3 + 2KOH ------> 2KNO_3 + 2H_2O 4HNO_3 + 4KOH ------> 4KNO_3 + 4H_2O.
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- 3. The process of claim 1 wherein the hydrogen peroxide is added in aerosol form.
- 4. The process of claim 2 wherein the potassium hydroxide is added in particulate form.
- 5. The process of claim 1 wherein $NO_{\rm x}$ emissions are reduced to a level below 40 ppm.



a) adding hydrogen peroxide in aerosol form to the effluent stream in sufficient amounts to generate nitric acid by first stage reactions as follows:

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2NO + H_2O_2 + O_2 ------ 2HNO_3

2NO_2 + H_2O_2 ------ 2HNO_3

2NO + 2NO_2 + O_2 + 2H_2O_2 ---> 4HNO_3; and thereafter
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b) adding sufficient potassium hydroxide in particulate form to the stream to generate potassium nitrate in second stage reactions as follows:

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2HNO_3 + 2KOH ------> 2KNO_3 + 2H_2O

4HNO_3 + 4KOH -----> 4KNO_3 + 4H_2O.
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- 7. The process of claim 6 wherein $NO_{\rm x}$ emissions are reduced to a level below 40 ppm.
- 8. A process for reducing NO_x emissions in a gaseous combustion effluent stream from a land-based gas turbine containing NO and/or NO_2 comprising the steps of:
- a) adding hydrogen peroxide to the effluent stream in sufficient amounts to generate nitric acid by first stage reactions as follows:

2NO +
$$H_2O_2$$
 + O_2 -----> 2HNO₃
2NO₂ + H_2O_2 ----> 2HNO₃
2NO + 2NO₂ + O_2 + O_2 + O_2 ---> 4HNO₃; and thereafter



b) adding sufficient potassium hydroxide to the stream to generate potassium nitrate in second stage reactions as follows:

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2HNO_3 + 2KOH -----> 2KNO_3 + 2H_2O

4HNO_3 + 4KOH -----> 4KNO_3 + 4H_2O.
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- 9. The process of claim 8 wherein the hydrogen peroxide is added in aerosol form.
- 10. The process of claim 8 wherein the potassium hydroxide is added in particulate form.
- 11. The process of claim 8 wherein $NO_{\rm x}$ emissions are reduced to a level below 40 ppm.